

FURTHER NOTES ON THE EMBRYONIC WHORLS OF THE  
MURICIDÆ.

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In 1890 I described in these Proceedings (pp. 66-72) the embryonic whorls of a number of species of this most interesting family; and in the Proceedings of the Rochester Academy of Science (Vol. 1, 1891, pp. 129-133) I added several species to those already described. From that time until a few months ago, I was unable to find perfect material in any collection under my charge. Some months since, however, I discovered perfect specimens of *Murex troscheli* and *Eupleura caudata*, with the nuclei intact. Descriptions of these are given below:—

*Murex troscheli*, Lischke. (Fig. 1.)

The nucleus consists of two and a half smooth, glossy, hyaline whorls, gradually increasing in size; a carina begins at the apex and encircles the base of the whorls near the suture below; it terminates in the fourth spiral line of the after growth. There is a considerable varix at the junction of the nucleus with the after growth. The whorls succeeding the nucleus are crossed by four spiral, beaded lines; spinose varices begin on the fourth whorl.

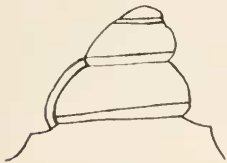


Fig. 1.

The only species whose nucleus approaches that of the present species is *Murex pliciferus* (Sowb.), but that is higher in proportion to its width and somewhat differently shaped. The number of whorls are the same in both species.

It may not be out of place to indicate here the species of which the nuclei have been described and figured. Descriptions of these may be found in the Proceedings spoken of above. The species described are as follows:—

*Murex scolopax*, Dillw.

“ *occa*, Sowb.

“ *tribulus*, Linn.

“ *rectirostris*, Sowb.

*Murex recurvirostris*, Sowb.

“ *similis*, Sowb.

“ *tryoni*, Hidalgo.

“ *cailleti*, Petit.

<i>Murex brevispina</i> , Lam.	<i>Murex aduncospinosus</i> , Beck.
“ <i>nigrispinosus</i> , Reeve.	“ <i>brandaris</i> , Linn.
“ <i>ternispina</i> , Lam.	“ <i>rufus</i> , Lam.
“ <i>tenuispina</i> , Lam.	“ <i>plcijerus</i> , Sowb.
“ <i>tribulus</i> , Linn.	“ <i>brevifrons</i> , Lam.

**Eupleura caudata**, Say. (Fig. 2.)

The nucleus of this species consists of one and a half semitransparent, glossy whorls; there is no indication of a carina upon them; the tip of the first whorl is immersed in the succeeding whorl and is



Fig. 2.

bent down to one side; the first half of the whorl, looking at the lateral outline, is about half the size of the portion succeeding it; the whorls are well-rounded and full; the sculpture, consisting of spiral and longitudinal lines, begins very faintly on the latter part of the second whorl and gradually grows stronger as the shell increases in size; there are about fourteen longitudinal lines to each whorl, after leaving the nucleus, which are crossed by two heavy spiral lines.

I have seen four specimens of this species, and the characters expressed above appear to be tolerably constant. The present species is the only one of this genus, which I have been able to examine. It will be interesting to know just how variable or constant the nuclei are in the different species. This is a field which needs a great amount of original investigation.